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| 10/597,467 | 02/14/2007 | Alessandro Facchin | 071308.0728 | 1533 |

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| EXAMINER |
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KIM, CHRISTOPHER S

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| ART UNIT | PAPER NUMBER |
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09/29/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

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|------------------------------|---------------------------------------|--|--|
| Office Action Summary | Application No. 10/597,467 | Applicant(s) FACCHIN, ALESSANDRO | |
| | Examiner Christopher S. Kim | Art Unit 3752 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 26 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2/26/07</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims 7-10 and 20 are objected to because of the following informalities: claim 1 hyphenates "seat-part" but claims 7-9 do not; the preamble of claims 10 and 20 are inconsistent with their parent claims and should be presented in independent form for administrative purposes. Appropriate correction is required.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 1-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites the limitation "the inward opening needle" in lines 4-5. There is insufficient antecedent basis for this limitation in the claim.

The term "proximity" in claim 1 is a relative term which renders the claim indefinite. The term "proximity" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is uncertain what distance is defined by the claim.

Claim 9 recites "the seat part is formed by a ball with a hole passing through the ball into which the needle is taken in..." Claim 1 defines that the seat part is an element of the needle, i.e., "wherein the needle further comprises a seat-part..." Claim 9 attempts to differentiate the seat part from the needle.

Claim 9 recites the limitation "a cavity" in line 5. It appears to be a double inclusion of the "cavity" recited in claim 1.

The term "proximity" in claim 11 is a relative term which renders the claim indefinite. The term "proximity" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is uncertain what distance is defined by the claim.

Claim 19 recites "the tip is formed by a ball comprising a hole into which the needle is inserted..." Claim 11 defines that the tip is an element of the needle, i.e., "wherein the needle further comprises a tip..." Claim 19 attempts to differentiate the tip from the needle.

Claim 19 recites the limitation "a cavity" in line 3. It appears to be a double inclusion of the "cavity" recited in claim 11.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

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(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1-4, 6-8, 10-14, 16-18, 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Palma (4,423,842).

Palma discloses a valve body comprising:

a needle 8;

a cartridge 32;

a recess 45;

a seat plate 46 comprising:

a needle seat 55;

the needle 8 further comprising:

a seat-part comprising:

a sealing area 74;

a cavity 91;

a fill part 90;

a sack volume 56.

The functional recitation "...makes the seat-part flexible in the sealing area" in lines 11-12 merely requires the ability to flex. Substantially all materials are capable of some degree of flexure.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 5, 9, 15 and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Palma (4,423,842).

Regarding claims 5 and 15, Palma discloses the limitations of the claimed invention with the exception of the filler part consisting of plastics. Plastics are well known in the art. It would have been obvious to a person having ordinary skill in the art at the time of the invention to have made the filler part of Palma from plastics to reduce corrosion.

Regarding claims 9 and 19, Palma discloses the limitations of the claimed invention with the exception of the needle being inserted into the ball to define the cavity. Doing so is merely making the Palma's needle and ball as separate elements. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have provided a separate needle and ball in the device of Palma, since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art. *Nerwin v. Erlichman*, 168 USPQ 177, 179.

8. Claims 1, 3, 4, 6, 7, 10, 11, 13, 14, 16, 17, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lambert et al. (6,338,445) in view of Stier (6,631,854).

Lambert discloses a valve body comprising:

a needle 12;

a cartridge 10;

a needle seat 13a;
the needle further comprising:
a seat-part comprising:
a sealing area 12b;
a cavity 17a, 27;
a filler part 18a;
a sack volume 37;
an actuator unit (fuel pump).

Lambert discloses the seat-part being flexible in figures 6 and 7 and in column 9, lines 55-60.

Lambert differs from what is being claimed in the cartridge comprising a seat plate. Lambert's seat plate is integral with the cartridge.

Stier discloses a fuel injector valve having a cartridge 2 having a seat plate 6.

It would have been obvious to a person having ordinary skill in the art at the time of the invention to have made the cartridge of Lambert into two parts to include a seat plate as taught by Stier to ease manufacturing.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher S. Kim whose telephone number is (571) 272-4905. The examiner can normally be reached on Monday - Friday, 8:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Len Tran can be reached on (571) 272-1184. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Christopher S. Kim/
Primary Examiner, Art Unit 3752

CK